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| EXAMINER |
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ROSS, DANA

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| ART UNIT | PAPER NUMBER |
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3722

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04/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/551,838 | Applicant(s) GUBLER ET AL. | |
| | Examiner Dana Ross | Art Unit 3722 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/20/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the disclosure refers to the claims by numbers and the titles within the specification do not follow standard practice. Applicant is required to amend the specification to remove these references and to incorporate into the disclosure the subject matter of these claims that is necessary to the understanding of the invention.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "machining station", "the compact", must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 1 is objected to because of the following informalities: Line 2, “production being carried out *as*” should be “production being carried out *at*”. Appropriate correction is required.

4. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In this instance, claim 16 is directed to the structure of the “blank” and does not further limit the structure of the machining station.

5. Claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In this instance, claim 17 is directed to the structure of a “blank” and does not include any of the limitations of the process of claim 1.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

For example, Claim 1 has the process of production being carried out by way of a machining station (this is shown in figure 1 with the spindle (1) and cutting tool (2)) with the process of machining with at least a CAD/CAM station. It is not clear if the machining process is claimed in claim 1. Claim 2 has the step of *pressing* the ceramic material. It appears that the “pressing” should be performed prior to the machining. It is not clear what process steps are being claimed or the order of the process. Also, in regard to claim 2, it is not clear from the disclosure or drawings what is being claimed by the “compact” (see claims 2 and 3). Claim 3, it is not clear from the disclosure what is meant by the “outer periphery of the compact is cylindrically turned externally.”

It is also noted the claims contain lack of antecedent basis terminology. See claim 15, line 5 which states "the holding tool". There is insufficient antecedent basis for this limitation in the claim.

All claims will be examined as best understood.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 9, 10, 11, 14, 15, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/45614A (Filser et al.).

Since WO 02/45614A is in a foreign language, all references will be made to the US Equivalent US Pat. No. 7,077,391 (Filser et al.).

Filser teaches a blank of ceramic material prior to final sintering (see col. 1, lines 13-21, col. 2, lines 39-41, for example) and a machine that is programmed controlled, or with a copy machining, or with the aid of a model pattern (see col. 1, lines 42-45, 61-64, for example); non-positive clamping, including a groove in the blank (see col. 3, lines 31-54, for example); the blank consists of zirconium oxide (see col. 4, lines 63-65, for example).

Re claim 16, Examiner notes that the material of the workpiece does not further limit the actual structure of the machine tool, but is instead intended use terminology. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Re claim 17, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process

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claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985.) (See MPEP 2113).

10. Claims 1-3, 11, 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. Pub. 2002/0155412 (Panzera et al.)

Panzera teaches it is well known in the art to use a CAD/CAM in the milling of dental prostheses with the known process of using ceramic zirconium oxide material that has not been subjected to final sintering and is subjected to isostatic pressing (see abstract, paragraphs 0005, 0010, 0016 and 0020, for example).

Re claim 16, Examiner notes that the material of the workpiece does not further limit the actual structure of the machine tool, but is instead intended use terminology. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Re claim 17, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985.) (See MPEP 2113).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Filser et al. in view of Panzera et al.

Filser teaches all aspects as discussed above but does not expressly disclose the terminology of CAD/CAM or the well known step of isostatic pressing or the range of the diameter of the blank greater than 50mm (claim 4) or greater than 80mm (claim 5) or the thickness greater than 10mm or the details of the specific weight of the material.

Panzera teaches it is well known in the art to use a CAD/CAM in the milling of dental prostheses with the known process of using ceramic zirconium oxide material that has not been subjected to final sintering and is subjected to isostatic pressing (see abstract, paragraphs 0005, 0010, 0016 and 0020, for example); and a sintering process carried out at at least 1500°C (see paragraph 0035, for example).

It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the generic copy machine that is programmed controlled, or with a copy machining, or with the aid of a model pattern with the specific CAD/CAM copy machine as taught by Panzera for the purpose of providing a method of manufacturing ceramic dental restoration with equipment that is known in the art to provide for optimum positioning and fit of the dental restoration (see Panzera paragraph 0002 and 0004).

It would have been an obvious matter of design choice to use whatever size blank was desired or expedient at the time the invention was made since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In this instance, the actual size of the blank does not provide for a specific limitation in the process, but instead provides for a size of the blank to be used based on the size of the dental prostheses being machined. There is nothing limiting in the method that would prevent the machining of the blank by Applicant down to the size that is claimed by Filser (see Filser col. 2, lines 64-67, for example) and as such does not provide for an inventive step in the machining process.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use whatever material was desired or expedient at the time the invention was made with whatever specific weight was desired or expedient based on the material required since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In this instance, the prior art expressly discloses the use of non-final sintering of zirconium oxide which is the same material of Applicant's claimed invention. Though Filser does not expressly disclose the hardening below the absolute specific weight (weight per unit volume) it would be obvious to modify Filser to include hardening below the absolute specific weight for the purpose of providing a blank of a particular hardness.

Furthermore, where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35

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U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Accordingly Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396. Accordingly, since the applicant[s] have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

13. Claims 4-8, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panzera et al.

Panzera teaches all aspects as discussed in the above rejection but does not expressly disclose a range of the diameter of the blank greater than 50mm (claim 4) or greater than 80mm (claim 5) or the thickness greater than 10mm.

Panzera teaches cutting the material into large uniaxially pressed plates of 1 inch (approx 25mm) into blocks.

It would have been an obvious matter of design choice to use whatever size blank was desired or expedient at the time the invention was made since such a modification would have

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involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In this instance, the actual size of the blank does not provide for a specific limitation in the process, but instead provides for a size of the blank to be used based on the size of the dental prostheses being machined. There is nothing limiting in the method that would prevent the machining of the blank by Applicant down to the size that is claimed by Panzera and as such does not provide for an inventive step in the machining process.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use whatever material was desired or expedient at the time the invention was made with whatever specific weight was desired or expedient based on the material required since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In this instance, the prior art expressly discloses the use of non-final sintering of zirconium oxide which is the same material of Applicant's claimed invention. Though Panzera does not expressly disclose the hardening below the absolute specific weight (weight per unit volume) it would be obvious to modify Panzera to include hardening below the absolute specific weight for the purpose of providing a blank of a particular hardness.

It would also be obvious to one having ordinary skill in the art at the time the invention was made to carry out the final sintering process at at least 1500°C for a period of roughly 16 hours since it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art.

Furthermore, where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing *KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Accordingly Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing *KSR*, 127 S.Ct. at 1740, 82 USPQ2d at 1396. Accordingly, since the applicant[s] have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

14. Claims 9, 10, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panzera et al in view of Filser et al.

Panzera teaches it is well known in the art to use a CAD/CAM in the milling of dental prostheses with the known process of using ceramic zirconium oxide material that has not been subjected to final sintering and is subjected to isostatic pressing (see abstract, paragraphs 0005, 0010, 0016 and 0020, for example).

Panzera does not disclose the non-positive clamping.

Filser teaches it is well known in the art to hold a blank with a non-positive clamp (see figure 1, for example).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the generic blank clamp of Panzera to use the specific non-positive clamp as taught by Filser for the purpose of providing a frame that only covers a small part of the surface of the blank (see Filser, Abstract).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Ross whose telephone number is 571-272-4480. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on 571-272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dana Ross/
Primary Examiner, Art Unit 3722